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ABSTRACT

This report examines the factors that influence the postsecondary enrollment and persistence of rural Pennsylvania students, compared to students from urban and suburban areas. The National Education Longitudinal Study of 1988 provided data on 216 rural, 103 urban, and 323 suburban high school graduates from Pennsylvania. Depending on their status in 1992 and 1994, respondents were labeled as "no postsecondary education (no PSE)," dropouts, late enrollers, or persistent students. "No PSE" accounted for 48 percent of rural students, 28 percent of urban students, and 36 percent of suburban students. Among students who enrolled in college, there were no differences by location for dropouts; suburban students were more likely to be persistent and less likely to be late enrollers than were rural or urban students. Rural students' college enrollment and persistence were significantly related to socioeconomic status, gender, marital status, enrollment in an academic high school program, enrollment in science courses in high school, having friends who thought studying was important, having friends with college plans, parent aspirations, student aspirations, parent involvement in college planning, and employment experiences. Postsecondary persistence was related to types of financial aid received, type of institution attended, acceptance at first-choice institution, and college major. Policy implications are discussed for improving college enrollment and persistence among Pennsylvania's rural students. (SV)

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Postsecondary Enrollment and Persistence of Students From Rural Pennsylvania

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Postsecondary Enrollment and Persistence of Students From Rural Pennsylvania

A report by

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Introduction

The issues of postsecondary persistence and attainment of rural students have attracted considerable attention from policy makers, educational researchers, teachers, school administrators and parents. Studies have shown that there are significant differences in educational attainment between rural, urban, and suburban students. Although rural and urban students have been found to attend school longer than in the recent past, there is still a gap between the college completion rates of rural and urban students compared to suburban students. This gap in attainment has continued to widen throughout the last 30 years as college completion rates for suburban students consistently exceed those of their rural and urban counterparts (e.g., Herzog & Pittman, 1995).

Pennsylvania has the largest rural population in the country, according to the 1990 U.S. Census, making the issue of postsecondary persistence and attainment for rural Pennsylvania students an important one for educational policy makers and practitioners.

The primary goals and objectives of this study address the following issues: 1) who among Pennsylvania rural students gains access to postsecondary education; 2) how well do those who enroll in college persist; and 3) what are the factors that influence rural Pennsylvania students' persistence. The report describes the characteristics of postsecondary students in rural Pennsylvania who continue to be enrolled in postsecondary education, as well students who drop out of postsecondary education. Students' demographic background is described, including personal characteristics such as gender, race and ethnicity, as well as family background demographics including socioeconomic status and family size. The report also describes students' academic and social integration, including postsecondary preparation, educational aspirations, and social interaction with peers and parents. In addition, postsecondary education experience is examined to determine the type of postsecondary institution students attended as well as their study major, financial aid, and enrollment behavior. Finally, the report describes early labor market experiences of students who do not go to college, including type of occupation held, earnings, and hours worked.

Methods

For the purposes of this study, the researcher needed a data set that was longitudinal in nature and was able to extract high school graduates from rural, urban and suburban areas. Based on these criteria, the researcher used the National Educational Longitudinal Survey (NELS: 88/94). The data has been collected by NCES (National Center for Educational Statistics) and provides extensive data on the condition of postsecondary education.

The NELS: 88/94 is the most comprehensive research database that has currently been collected by NCES. NELS: 88/94 surveyed a cohort of eighth graders in 1988 and subsequently followed them at two-year intervals through 1994. The first follow-up in 1990 provided the data necessary to understand the transition from elementary to secondary education. In the spring of 1992, when most of the NELS sample was in twelfth grade, the second follow-up took place. The second follow-up focused on the transition from high school to the labor force and postsecondary education. In the spring of 1994, the third follow-up was administered which questioned sample members about their labor force and postsecondary education experiences.

NELS: 88/94 is particularly well suited for this research. First, NELS: 88/94 allowed the researcher to investigate the status and factors influencing the persistence of postsecondary education. Secondly, NELS: 88/94 consists of a nationally representative sample of approximately 24,000 students, among which about 642 students from Pennsylvania are represented.

The Study Group

In this study, rural Pennsylvania will be defined by the school district. The school setting in the national data from NCES is classified on the basis of the Metropolitan Statistical Area (MSA) concept from the Federal Information Processing Standards as used by the U.S. Census. This classification reflects the sample school's metropolitan status at the time of the 1980 Decennial Census (NCES, 1994). The three types of schools described in this report are rural, urban and suburban. In the sample, there are 216 high school students who graduated from rural schools, 103 high school students who graduated from urban schools, and 323 high school students who graduated from suburban schools.

This report focuses on the postsecondary persistence of students living in rural settings compared with students living in urban or suburban areas. In this study, postsecondary persistence is defined in the following way: (a) If the respondents reported that they were not in college in either 1992 or 1994, they were labeled "No Postsecondary Education (No PSE)," indicating that they never attended college; (b) If the respondents said they were enrolled in college in 1992, but were not attending college in 1994, they were considered to be "dropouts" indicating they started college but had since dropped out; (c) If the respondents said they were not enrolled in college in 1992, but were enrolled in 1994, they were considered to be "late enrollees," indicating delayed enrollment in college; and (d) If they were enrolled in college both in 1992 and 1994, they were labeled as "persistent," indicating that up until the administration of the follow-up survey they were still in college.

Based on the current criteria for defining postsecondary persistence, 64 percent of the sample had enrolled in college (PSE) (including delayed enrollees and those who eventually dropped out of PSE), and 36 percent of the sample never attended college (No PSE) (See Figure 1 below).

Compared to urban and suburban Pennsylvania students, rural students were more likely not to attend college. Among rural students in the study group, 48 percent did not attend college, compared to only 28 percent of urban students and 36 percent of suburban students (See Figure 2 on following page).

Overall, among rural, urban and suburban students who enrolled in college, about 72 percent were persistent, 16 percent were dropouts and 13 percent were late enrollees (See Figure 3 on following page). There were more persistent students from suburban settings than from either rural or urban settings (75 percent versus 69 and 68 percent, respectively). Among the students who dropped out of college,

Figure 1

Percentage of Pennsylvania High School Graduates Enrolled in Postsecondary Education (PSE), 1994

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there were no significant differences between rural, urban and suburban students (14, 15 and 16 percent, respectively). Among students who delayed enrollment, rural and urban students were more likely to enroll late in college than suburban students (17 and 18 percent versus 9 percent, respectively).

Demographic Characteristics

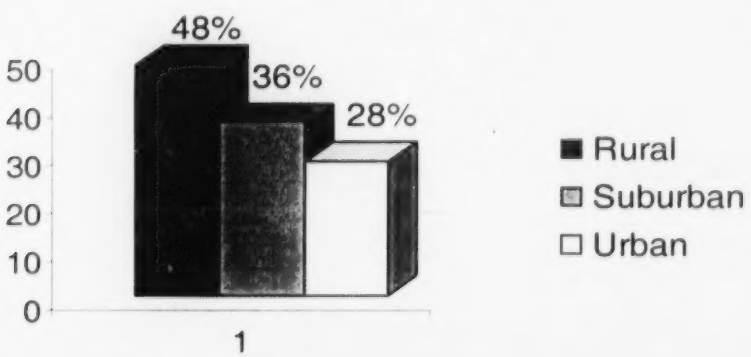
The demographic characteristics examined in this study include socioeconomic status (SES), race, gender, marital status and family size. Socioeconomic status, gender and marital status were found to be significantly related to the college enrollment and persistence of rural students. Also, since there were so few minority students in Pennsylvania (94 percent of rural Pennsylvania high school graduates were white), an analysis of the effect of race on college enrollment and persistent would not be reliable.

Socioeconomic status (SES)

Rural Pennsylvania high school graduates who did not go to college were almost evenly distributed between the low and middle SES levels, similar to urban students. Their suburban counterparts, however, were more likely to be in the middle and high SES levels. The SES of rural students who enrolled in college differed according to persistence category. For example, rural dropouts were almost evenly distributed among low, middle and high SES levels; whereas, rural persistent students were concentrated in the middle and high levels. Urban dropouts followed a different pattern with more students in the middle and low levels. Suburban students who enrolled in college were in the higher SES levels, regardless of their persistence category. Results of the multivariate analysis performed for the study indicated that SES was a significant predictor of persistence among rural students, even after social integration, academic integration and financial aid were taken into consideration.

Figure 2

Percentage Rural, Urban and Suburban Pennsylvania Students Who Did Not Attend Postsecondary Education



Gender

There were significant differences in college enrollment patterns between rural males and females who did not go to college. Rural males were more likely not to attend college than rural females, the opposite pattern of urban students. Suburban students, however, were equally likely not to attend college, regardless of gender. Although rural females were more likely than males to go to college, they were also more likely to dropout or delay enrollment, similar to suburban students but unlike urban students.

RURAL STUDENTS WHO ENROLLED IN COLLEGE WERE MUCH MORE LIKELY TO BE ENROLLED IN AN ACADEMIC PROGRAM IN HIGH SCHOOL THAN THOSE WHO DID NOT ATTEND COLLEGE.

Among persistent students, females were more likely to be persistent than males for all high school settings. However, according to the results of the multivariate analysis, gender was not a significant contributor to college persistence after taking SES, academic integration, social integration, academic integration and financial aid into account.

Marital Status

The NELS:88/94 data indicate that marital status may be significantly related to college enrollment and persistence among rural, urban and suburban Pennsylvania students. For all persistence categories, the majority of rural, urban and suburban students were single. Among rural students who were persistent in college, 99 percent were single and 1 percent were in a marriage-like relationship; none were married, divorced or separated. Urban and suburban students followed very similar patterns.

High School Experiences

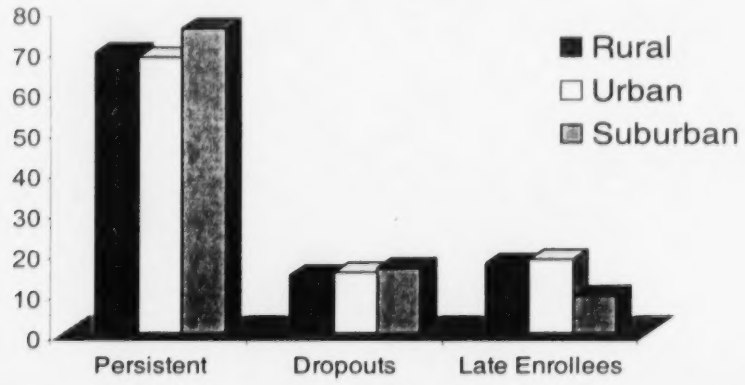
Various aspects of rural Pennsylvania high school students' experiences were examined to determine their influence on postsecondary enrollment and persistence. The factors examined in this section include the students' most recent high school program type (i.e., academic, vocational or "other"), the number of science courses taken in high school, the students' diploma or GED status, and whether the student took the Scholastic Aptitude Test (SAT), a postsecondary entrance exam.

Most Recent High School Program Type

Whether students were in the academic or vocational program in high school was a significant factor in students' college enrollment and persistence. Rural students who did not attend college were more likely to be in a vocational or "other" program than those who enrolled in college. Similar patterns were found among urban and suburban students. Rural students who enrolled in college were much more likely to be enrolled in an academic program than those who did

Figure 3

Percentage of Students in Rural, Urban and Suburban Pennsylvania by Postsecondary Education Persistence Status, 1994. (NOTE: Percentages may not sum to 100 due to rounding.)



not attend college. For example, 64 percent of rural students who did not go to college were in the academic program compared to 100 percent of dropouts, 90 percent of late enrollees and 95 percent of persistent students. Similar trends were found for urban and suburban students.

Number of Science Courses

8 This study found a significant relationship between the number of science courses taken in high school and postsecondary enrollment and persistence. Among rural, urban and suburban Pennsylvania high school graduates who did not go to college, 98 to 100 percent were likely not to have taken any physics, chemistry or biology courses in high school. Rural, urban and suburban students who enrolled in college were likely to have taken more science courses in high school (i.e., physics, chemistry and biology) than those who did not attend college. Furthermore, persistent students were more likely to have taken more science courses than college dropouts. The multivariate analysis confirmed that the number of science courses taken in high school is a significant predictor of postsecondary persistence, even after taking into account the students' demographic characteristics, social and academic integration, and financial aid received.

High School Diploma/GED Status

Among Pennsylvania students who completed high school but did not go to college, about three-fourths received a high school diploma and one-quarter received a GED or equivalent. In contrast, almost all students who enrolled in college had received a diploma rather than an equivalent. Receiving a high school diploma rather than a GED or equivalent was found to be a significant factor influencing college enrollment.

Postsecondary Entrance Exam (SAT)

There is a clear relationship between taking the Scholastic Aptitude Test (SAT) and college enrollment. Rural, urban and suburban students who did not go to college were far less likely to have taken the SAT than those who enrolled. Furthermore, rural students who did not go to college were less likely to take the SAT than their urban or suburban counterparts (17 percent versus 24 and 31 percent, respectively). Rural students who enrolled in college were at least four times as likely to take the SAT than those who did not enroll (75 percent of dropouts, 74 percent of late enrollees, 92 percent of persistent students versus 17 percent of students not enrolled). Results of the multivariate analysis confirmed that taking a postsecondary entrance exam is a significant contributor to college enrollment and persistence, even after taking into account demographic characteristics, academic and social integration, and financial aid received.

Social Integration of Students

Aspects of students' social integration were analyzed, including self-concept and the influence of peer relationships. The importance of studying among the students' friends, and the number of friends with no plans for college were both found to be factors influencing college enrollment and persistence.

Importance of Studying Among Friends

When asked about the importance of studying among friends, the majority of rural students who did not go to college responded that their friends considered studying "somewhat important" rather than "not important" or "very important," similar to urban and suburban students. In contrast, rural, urban and suburban students who went to college were more likely to say that studying was "somewhat" or "very" important among their friends.

Number of Students' Friends with No Plans for College

About 75 percent of rural, urban and suburban students who were persistent in college reported that they had a very small number of friends who planned to end their education with high school, implying that the majority of persistent students' friends did have plans to go to college. Among rural students who were persistent, 82 percent said they had "few" or "no" friends that were not planning to go to college; 75 percent of urban persistent students and 76 percent of suburban persistent students had similar responses.

Educational Expectations and Parental Involvement

Parental and student aspirations for pursuing college are examined in this section as well as the amount of parental discussion about the students' college plans.

Level of Education Father Wants Child to Attain

Rural students who did not attend college were (a) more likely to report that their fathers expected them to attend vocational school or end their schooling with high school, and (b) less likely to report their fathers expected them to attend college or graduate school than their urban or suburban counterparts. In contrast, rural, urban and suburban students who enrolled in college were much more likely to say that their fathers expected them to attend college and/or graduate school, and less likely to expect their children to attend vocational school.

Level of Education Mother Wants Child to Attain

Mothers' expectations for the students' highest level of schooling were similar to fathers' expectations. Students who did not attend college were more likely to be expected by their mothers to go to vocational school or end their education with high school than those students who attended college. This general pattern was seen for rural, urban and suburban students. Rural students, in particular, were more than twice as likely to be expected by their mothers to end their education with high school than urban or suburban students (26 percent versus 4 and 12 percent). Students who enrolled in college, on the other hand, were more likely to be expected by their mothers to go to college or graduate school, regardless of high school setting. For example, 95 percent of persistent rural students reported that their mother expected them to attend college or graduate school, similar to urban and suburban students.

Level of Education the Student Hopes to Attain

Rural students who did not go to college were about twice as likely as urban and suburban students to expect they would end their education with high school (27 percent versus 15 and 13 percent). In contrast the vast majority of students who enrolled in college expected to go to college or graduate school, regardless of whether they graduated from rural, urban or suburban high schools.

Amount of Parental Discussion about College Plans

More frequent parental discussions about college are significantly related to college enrollment and persistence among rural, urban and suburban students. Rural students who did not attend college, were more likely than their urban or suburban counterparts to report that they "never" discussed going to college with parents and were less likely to discuss

college "often." Furthermore, rural students who did not go to college were two to three times less likely than urban or suburban student to say that they "often" discussed college with their parents. In contrast, most students who attended college reported that they "sometimes" or "often" discussed going to college with their parents, with very few reporting that they "never" discussed college. The results of the multivariate analysis support these findings. After taking demographic characteristics, academic integration, social integration, and financial aid into account, the amount of parental discussion about college plans remained a significant contributor to college enrollment and persistence of rural students.

Postsecondary Educational Experiences

Postsecondary educational experiences are described for Pennsylvania high school students who enrolled in college. Factors examined in this section include the number of types of financial aid the students received, the type of postsecondary institution students first applied to, whether students attend college in-state at the beginning of their college experience and for their longest enrollment period, whether students attended their first-choice postsecondary institution, the type of postsecondary institution attended, and the students' college major.

Number of Types of Financial Aid

The number of types of financial aid a student received (i.e., college work-study, grants/scholarships/fellowships and loans) was significantly related to college persistence. For example, rural persistent students were more likely to have at least one or more types of financial aid, more types than rural dropouts or late enrollees. Suburban persistent students followed similar patterns. However, urban persistent students were somewhat more likely to receive no forms of financial aid. The same pattern was found for students who delay enrollment. The results of the multivariate analysis confirmed that financial aid makes a significant contribution to the college enrollment and persistence of rural students, even after taking demographic characteristics, academic integration and social integration into account.

Type of Institution to which the Student First Applied

Rural dropouts were less likely to apply first to a four-year institution and more likely to apply first to a two-year institution than persistent students. Regardless of high school setting, persistent students were more likely to apply first to a four-year college than a two-year public college.

College Attendance In-State or Out-of State

Rural, urban and suburban dropouts were more likely to attend college in-state than persistent students. Rural students were slightly more likely to attend college in-state (i.e., in Pennsylvania) than urban or suburban students, for all persistent categories. This is the case for the first postsecondary institution attended as well as the institution attended during the longest enrollment period.

Attended First Choice Postsecondary Institution

Rural persistent students were somewhat more likely to attend their first choice postsecondary institution than their urban and suburban counterparts (75 percent versus 59 and 62 percent, respectively). Overall, dropouts and late enrollees were less likely to attend their first choice than persistent students, especially for rural and suburban students.

RURAL STUDENTS WERE SLIGHTLY MORE LIKELY TO MAJOR IN EDUCATION AND SLIGHTLY LESS LIKELY TO MAJOR IN BUSINESS THAN URBAN AND SUBURBAN STUDENTS.

Postsecondary Education Type

The majority of college dropouts were enrolled in four-year colleges rather than two-year colleges for all high school settings. Rural dropouts, however, were more likely to attend two-year public colleges than urban or suburban dropouts (33 percent versus 22 and 11 percent). Persistent students, on the other hand, were far more likely to enroll in four-year colleges than two-year colleges, regardless of high school setting.

College Major

Rural, urban and suburban students followed similar patterns regarding college major. College majors chosen by Pennsylvania high school graduates included science and math (24 to 28 percent), business (17 to 24 percent), health care (16 to 17 percent), humanities (14 to 17 percent), education (8 to 13 percent), and the arts (5 to 8 percent). Rural students were slightly more likely to major in education and slightly less likely to major in business than urban and suburban students. Among persistence categories, rural high school graduates who dropped out of college were less likely than persistent students to major in science and math and more likely to major in health care or a business-related field.

Employment Experiences

Early labor experiences such as the job or occupation longest held are described for students who did not attend college. The average number of hours worked per week and the average monthly earnings are given for students who did not attend college and for students who dropped out. The importance or value of work to students is described for students who did not go to college, with comparisons to dropouts, late enrollees and persistent students.

Job or Occupation Longest Held

Rural students who did not go to college were more likely to be in professions requiring manual labor (i.e., laborers or craftsmen) than urban or suburban students (51 percent versus 22 and 35 percent, respectively). Specifically, rural Pennsylvania high school graduates who did not go to college were employed as laborers or craftsmen (51 percent), sales or service workers (26 percent), clerical workers (9 percent), military personnel (5 percent), professionals (3 percent), managers (3 percent), and farmers (3 percent). Rural students were less likely to do clerical work, be in sales or service occupations, or hold management positions than their urban or suburban counterparts.

Number of Hours Worked

Dropouts and students who did not go to college followed very similar patterns for the average number hours worked per week. Rural high school graduates who did not go to college worked 41 hours per week on average, similar to suburban students but slightly more than urban students (39 and 35 hours per week). Rural college dropouts worked an average of 37 hours per week, similar to suburban students but slightly more than urban students (39 and 32 hours per week).

Monthly Earnings

The average monthly income of rural Pennsylvania students who did not go to college was $1,023. Rural students' earnings were similar to suburban students' but more than urban students' earnings. Rural dropouts, however, earned less money per month than either urban or suburban dropouts ($655 versus $756 and $874, respectively, on average).

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Importance of Work to Students

Students who did not attend college placed a slightly higher importance on work as measured by the Work Orientation Scale than those who enrolled in college (i.e., dropouts, late enrollees and persistent students). This scale measured three aspects of work values: importance of success in work, finding steady work, and making "lots of money."

12 Limitations of the Study

The following limiting factors should be considered when generalizing the results of this study. The NELS: 88/94 database used in this study was designed as a nationally representative sample. Because this study extracted only Pennsylvania data, the national design weights could not be used. Therefore, it is advised that the interpretation of the data in this study should be used with caution.

The NELS: 88/94 database provided valuable information about Pennsylvania students' high school experiences and transition period to college. However, specific information about the postsecondary educational institutions attended was limited. Further studies are needed to examine how the characteristics of the postsecondary institution influences rural students' college enrollment and persistence.

Policy Implications

The findings of this study indicate a number of policy areas that could improve college enrollment and persistence among rural Pennsylvania high school graduates.

Financial Aid

First, more financial aid options may improve postsecondary persistence among rural students. Rural persistent students received more types of financial aid than their urban or suburban counterparts. In fact, over half of rural students who were persistent in college received at least two sources of financial aid. Postsecondary persistence might be improved for rural students if they received at least one, but ideally a combination of two or more types of financial aid. This aid could be in the form of grants, scholarships, fellowships, college work-study programs or loans. Increasing the number and types of financial aid options available as well as increasing students' awareness of the availability of these options may improve persistence among rural Pennsylvania students.

Early Preparation

High school policies that foster early preparation for college could improve students' chances of enrolling and persisting in college (Rojewski, 1996). According to the results of this study, there is a significant relationship between the high school experiences of rural students and college enrollment and persistence. For example, the data indicate that students who enrolled in college were more likely than students who did not enroll to (a) have been in the "academic" program in high school, (b) have taken more science courses in their high school program (i.e., biology, chemistry and physics), (c) have received a high school diploma rather than a GED or equivalent and (d) have taken the Scholastic Aptitude Test (SAT).

It is understood that not all students aspire to college. However, those students who intend to go to college should be assisted in making informed choices in planning their program of study. Several steps should be taken at the high school level to improve students' chances of college enrollment and persistence. First, high school students who aspire to college should be identified early. If high school students receive counseling and career guidance only during their junior or senior year, it may be too late to plan for courses that they need. Next, counselors

could provide information about college requirements and give guidance in choosing courses that would prepare students with the background necessary for their chosen major. Information about college enrollment and persistence from this study may give counselors, teachers and parents new insight on how to advise students. Students aspiring to college should be encouraged from the beginning of high school to be in an academic program rather than a vocational program. Students should consider including science courses in biology, chemistry and physics in their plan of study. They should also plan to take a postsecondary entrance exam such as the SAT.

Also, steps should be taken to increase persistence at the high school level since students who received a high school diploma were more likely to enroll in college and persist than those who received a GED or an equivalent. High school experiences can increase students' chances of attaining a college degree or they can limit students' choices and chances of enrolling and persisting in college. Implementing policies that foster college enrollment and persistence can help students who aspire to a college education have the best chance to succeed.

Parental Involvement

Policies fostering parent involvement in their children's college decisions may increase students' chances of enrollment and persistence in college. The findings of this study show that there is a significant relationship between fathers' and mothers' expectations for students' college attendance and college enrollment behavior. Students whose parents expected them to attend college were more likely to enroll and persist in college. There was also a strong indication that the amount of parental discussion about college positively influences a child's college enrollment behavior. Students whose parents discussed college plans "often" were more likely to enroll and persist in college than those who "never" discussed college with their parents. Recommendations to increase college enrollment and persistence with regard to parental involvement include implementing programs that (a) increase parental awareness of the effects of their expectations for their child's education, and (b) inform parents of the positive influence of frequent parent-child discussions about college.

Positive Peer Relationships

Policies increasing positive peer relationships of high school and college students may foster postsecondary persistence (Berger & Milem 1999). For example, this study found that high school students who did not go to college were more likely to have friends who thought that studying was "somewhat" or "not important" than students who were persistent in college. Programs fostering positive social relationships might include mentorship programs using successful upperclassmen to be matched with younger students. In addition to programs involving peers, adults such as faculty advisors or counselors could also be assigned to students for the purpose of increasing students' social integration, and ultimately high school and college persistence.

Policies Promoting Transfers

Policies that promote transfer from two-year colleges to four-year colleges could increase postsecondary persistence. The results of this study show that rural dropouts were more likely to attend two-year public colleges than urban or suburban dropouts. Policies that would increase the transfer rate from two-year public colleges to four-year colleges might increase the likelihood of college persistence for students from all high school settings, but especially for rural students. For example, programs could include (a) two-year colleges providing advisement and other assistance for students who are

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transferring to a four-year college, and (b) organizing collaborative efforts between two-year colleges and four-year colleges to ease the transfer transition process (Astin, 1975).

Increasing Career Awareness

Programs to increase career awareness and development among students will help students make informed choices about career training programs or college enrollment. School counselors could help students identify their career goals and use this information to provide guidance about the most appropriate high school program (i.e., academic or vocational) and selection of courses. Career awareness may also involve providing information about careers that rural students may not have experienced in their hometown areas. Overall, rural students and dropouts who did not go to college were much more likely than urban and suburban students to be employed in sales and service positions or jobs requiring manual labor. School programs that develop career awareness and development would help students make informed choices by broadening their range of career possibilities (Conroy, 1997). Counselors might help students prepare for the occupation they aspire to by recommending specific training programs, job shadowing and apprenticeship and other programs.

Programs to Retain Students

Postsecondary institutions could be targeted for programs that are effective in retaining students. According to Tinto's Integration Model, programs that foster social and academic integration are likely to improve students' postsecondary persistence (Tinto, 1975, 1982, 1988, 1993). Academic integration is associated with students' academic success in school. Postsecondary institutions can foster academic integration by providing academic support programs such as tutoring services and other remedial help for students. Counselors could also be available to give academic guidance and advise students in planning a suitable program of study. Postsecondary institutions should also find ways of promoting students' social integration. Tinto's concept of social integration involves the social bonds that students form with their classmates, faculty or others affiliated with the school. For example, postsecondary institutions could foster social integration by organizing freshmen orientation programs (Murtaugh, Burns & Schuster, 1999), clubs and the promotion of other on-campus academic activities. Programs to increase faculty-student interaction might also increase postsecondary persistence (Pascarella and Terenzini, 1979). The social integration of freshman is of particular importance, since the majority of students drop out of college before the beginning of their sophomore year. It would be beneficial for postsecondary institutions to identify students who are at risk for dropping out so that services could immediately be targeted to these students (Allen, 1999; Berger & Milem, 1999). Implementing policies that foster postsecondary persistence will improve the likelihood of degree attainment for rural students, and benefit urban and suburban students as well.

References

Allen, D. "Desire to finish college: An empirical link between motivation and persistence,"*Research in Higher Education* 40 (1999): 461 – 485.

Astin, A.W. *Preventing students from dropping out.* San Francisco, CA: Jossey-Bass, 1975.

Berger, J.B., & Milem, J.F. "The role of student involvement and perceptions of integration in a causal model of student persistence,"*Research in Higher Education* 40 (1999): 641 – 664.

Conroy, C.A. "Influences on career choice of rural youth and resulting implications for career development programming: When job awareness and exploration are not enough,"*Journal of Vocational Education Research* 22 (1997): 3 – 19.

Herzog, M.J.R., & Pittman, R.B. "Home, family, and community: Ingredients on the rural education equation," *Phi Delta Kappan* 77 (1995): 113 – 118.

Murtaugh, P.A., Burns, L.D., & Schuster, J. "Predicting the retention of university students," *Research in Higher Education* 40 (1999): 355 – 371.

Pascarella, E.T. & Terenzini, P.T. "Interaction effects in Spady's and Tinto's conceptual models of college dropout," *Sociology of Education* 52 (1979): 197 – 210.

Rojewski, J.W. "Occupational aspirations and early career-choice patterns of adolescents with and without learning disabilities," *Learning Disability Quarterly* 19 (1996): 99 – 116.

Tinto, V. "Dropout from higher education: A theoretical synthesis of recent research," *Review of Educational Research* 45 (1975): 89 – 125.

Tinto, V. "Limits of the theory and practice in student attrition," *Journal of Higher Education* 53 (1982): 687 – 700.

Tinto, V. "Stages of student departure: Reflections on the longitudinal character of student leaving," *Journal of Higher Education* 59 (1988): 438 – 455.

Tinto, V. *Leaving College: Rethinking the Causes and Cures of Student Attrition.* Chicago, IL: The University of Chicago Press, 1993.

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